

Total No. of Questions : 8]

SEAT No. :

PD-4072

[Total No. of Pages : 2

[6402]-32

S.E. (Electronics & Computer Engineering)

COMPUTER ORGANIZATION

(2019 Pattern) (Semester - III) (204203)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6 and Q.7 or Q.8.
- 2) Figures to the right side indicate full marks.
- 3) Assume the suitable data, if necessary.

Q1) a) What is a programmable interrupt controller? Draw block diagram explain the function of each block. [8]

- b) Explain functions of following blocks of DMA Controller IC 8237:[10]
- i) Timing and control section
 - ii) Internal register structure (Any 3)

OR

Q2) a) Write short note on interrupt driven I/O. [8]

- b) Draw and explain blocks of I/O module. What are the key tasks of I/O modules? [10]

Q3) a) What are the factors that must be considered for deciding the instruction length. [8]

- b) Explain the following addressing modes with one example each: [9]
- i) Immediate
 - ii) Register Indirect
 - iii) Direct Addressing

OR

P.T.O.

- Q4)** a) Explain following addressing modes of 8086 with suitable examples. [9]
i) Register indirect addressing mode
ii) Indexed addressing mode
iii) Based addressing mode
b) What are machine instruction characteristics? State types of instructions. [8]
- Q5)** a) Discuss the process of pipelining in Pentium. [8]
b) Depict the concept of instruction level and machine parallelism. [10]
- OR
- Q6)** a) Discuss the architecture of Pentium IV processor. [8]
b) Explain in detail, pipeline performance with reference to design and execution. [10]
- Q7)** a) Explain in detail Microprogram Sequencing. [8]
b) Write a short note on fetching a word from Memory. [9]
- OR
- Q8)** a) Give difference between Hardwired Control Vs Microprogrammed Control. [8]
b) Explain in detail Multiple Bus Organization. [9]

